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ABSTRACT

This study was designed for evaluation of the Preparing Tomorrow's Teachers for Technology (PT3) Grant goal that all preservice teachers will effectively integrate technology into instruction and serve as role models and mentors for inservice teachers as determined by qualitative and quantitative assessment tools. The Group Support System (an electronic meeting system; GSS) was used to collect qualitative data and a paper-and-pencil survey was used to collect quantitative data from 110 candidates as they completed student teaching. Descriptive statistics from the analyses were compared. Results from the GSS data analysis found that 36 different technologies were used during student teaching. PowerPoint presentation software (n=57) and Internet)n=49) were the most frequently used. Ninety-one percent of the student teachers stated that using technology increased student learning in their classrooms. Through quantitative analysis, competency levels using different technologies were identified. Qualitative analysis also identified areas for future training. Both National Council for Accreditation of Teacher Education (NCATE) and National Teacher Standards require new teachers to have technology competencies. The paper includes a description of the GSS process and the survey developed for the study. (Contains 5 tables and 14 references.) (Author/SLD)

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Running head: EVALUATING STUDENT TEACHERS' TECHNOLOGY USE

Evaluating Student Teachers' Technology Use with Group Support Systems and Questionnaire

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Abstract

This study was designed for evaluation of the PT3 Grant goal, " All pre-service teachers will effectively integrate technology into instruction and serve as role models and mentors for in-service teachers, as determined by qualitative/quantitative assessment tools." Group Support System (GSS) was used to collect qualitative data and a paper-and-pencil survey was used to collect quantitative data from 110 candidates as they completed student teaching. Descriptive statistics from the analyses were compared. Results from GSS data analysis found that 36 different technologies were used during student teaching. PowerPoint presentation software (N=57) and Internet (N=49) were the most frequently used. Ninety-one percent of the student teachers stated that using technology increased student learning in their classrooms. Through quantitative analysis, competency levels using different technologies were identified. Qualitative analysis also identified areas for further training. Both NCATE and National Teacher Standards require new teachers to have technology competencies. This study presents two methods of evaluating competencies at the end of student teaching. Paper includes a description of the GSS process and the survey developed for the study.

Evaluating Student Teacher's Technology Use with Group Support Systems and Questionnaire

The context for this study was the teacher education program at Morehead State University, a regional state university of approximately 9,000 students in northeastern Kentucky. The University's Preparing Tomorrow's Teachers for Technology (PT3) grant, funded in 2000, was designed to have an immediate, simultaneous impact on the education of teacher candidates, professional development of university faculty, curriculum reform, and provision of technology rich field experiences.

Purpose of the Study

This evaluation study was undertaken during the third year (2002-2003) of the PT3 grant and focused on the extent to which student teachers used technology during student teaching. The study was planned to yield information for both grant evaluation and National Council for Accreditation of Teacher Education (NCATE) program documentation. The evaluation goal measured by the study was one of five goals established at the time of the grant proposal: All pre-service teachers will effectively integrate technology into instruction and serve as role models and mentors for in-service teachers, as determined by qualitative/quantitative assessment tools.

Theoretical Framework

The current status of research on collaborative work groups with particular emphasis on electronic meeting systems, often referred to as Group Support Systems (GSS), is one of high activity with interest from multiple academic perspectives in Information Systems. Malone and Rockart (1991) emphasized that groupware supports forming geographically distributed teams of diverse experts. According to Coleman (1995), the two major challenges to groupware are

technical and organizational. Even if the technology solves the problem and works well, if the organizational culture does not support it, the groupware implementation may not be successful.

Field studies have consistently noted time savings as a major benefit of GSS use. Comments such as "…the process allowed us to do in three days what would have taken months to do…." are commonplace (Dennis, Jessup, Nunamaker, & Vogel, 1998, p. 22). Nunamaker, Dennis, Valacich, Vogel, and George. (1991) noted a consistent time savings of over 50% across a broad range of tasks and group characteristics in conjunction with extended data collection at sites of major multi-national corporations.

Group Support Systems (GSS), computerized support for group processes, has been widely used in the business community and researched by business academics (e.g., DeSanctis, 1998; Lobert, 1993; Lee, 1997; Tai-Sheng, 1993; Weatherall & Nunamaker, 2000). GSS has recently been applied to educational processes by researchers (Kwok & Ma, 1999; McLean, McAlister, Rivera, & Snyder, 1999; Small & Venkatesh, 1995).

In a study by McLean, McAlister, Rivera and Snyder (1999), education faculty used the GSS process "...to list the key characteristics of successful pre-kindergarten programs" (p. 11). The researchers reported that response to completing this task was a positive one. Many participants felt that "...the process was a learning experience and they appreciated the opportunity to contribute all of their ideas about the topics, not having to wait for someone else, or be concerned that someone would find their ideas stupid" (McLean et al, p. 13). The method of the using the GSS process allows the evaluator to gather the information in less time without using without "...doing multiple mailings or gatherings or allow one strong individual to sway group opinion as in focus groups" (McLean et al., p. 14).

Patton (1990) described a common data analysis process called triangulation of data. Triangulation of data was defined as "...the use of a variety of data sources in a study" (p. 187). This study used this evaluative process as the GSS process and a paper-and-pencil survey are employed to gather comparative data to measure student teachers' use of technology.

Method

Participants

The participants were 110 undergraduate teacher education candidates who were completing student teaching spring semester 2003. This was a census of the student teachers for spring semester. Participation was a requirement of the professional semester. The candidates were divided (non randomly) into five groups of 22 students each.

Procedures

Two procedures were used for this study: (1) the GSS process in which student teachers simultaneously (anonymously) replied to three open-ended questions about their use of technology during student teaching, and (2) a paper-and-pencil Likert-type item rating scale survey on competent use of specific technologies. The qualitative procedure was used first to allow categories to emerge from the candidates. It was thought that presenting the quantitative questionnaire first would shape the subsequent qualitative responses.

GSS data collection process.

In four separate one-hour sessions of 25-30 participants, the 110 student teachers simultaneously (anonymously) replied to open-ended evaluative questions about their student teaching experience. The three technology-related questions were: (1) How are you infusing technology into your student teaching activities? (2) What are the barriers to technology use in

the schools in which you are student teaching? and (2) How has infusing technology changed the learning process for your students?

The student teachers met in the GSS lab on campus. In the lab, three tables were configured as a "U." Twenty-five network-connected laptop computers were on the tables. A large screen hung from the wall at the front of the room. The facilitator, Dr. Steve Hunt, stood at the front of the room at his laptop computer. The GSS process was explained to the student teachers and they were assured that their comments (which appeared as text on the screen in the front of the room) were completely anonymous. The candidates could read the responses of other candidates, but did not know the source of the comments.

Paper-and-pencil survey data collection.

Immediately following the collection of GSS qualitative data, the student teachers responded to a paper-and-pencil Likert-type item rating scale survey that queried their competency and use of specific technologies. Two questions were used for the paper-and-pencil survey (1) How skilled are you in using the following technologies to enhance your teaching? and (2) How prepared are you to teach your students to use the following technologies?

Results

GSS Qualitative Data

The qualitative data resulting from the Group Support Systems (GSS) were analyzed with Microsoft Word by coding and sorting. Categories emerged through this analysis and are presented in Tables 1 through 3 below. Thirty-six categories emerged from the qualitative analysis of the GSS data (Table 1). The most frequently mentioned technology was Power Point (N=57), followed by Internet (N=49). Overhead Projector (N=28) and Computers (N=26) were also frequently mentioned.

(Place Table 1 about here)

Table 2 below presents the results of question two, " What are the barriers to technology use in the schools in which you are student teaching?" Of the 110 candidates responding to the GSS survey, only 18 identified barriers to technology use.

(Place Table 2 about here)

Table 3 below presents the results of the question, "How has infusing technology changed the learning process for your students?" A total of 118 comments came from the group of 110 student teachers for this question. One hundred and two responses were positive. One hundred students stated that the use of technology "Increased student learning." Two statements indicated that the use of technology "Helped to diversify instruction." Six statements were that technology "Has not changed the learning process." Ten statements indicated that technology "Can be a distraction in the classroom."

(Place Table 3 about here)

Paper-and-Pencil Survey Data

Following the collection of GSS qualitative data, the student teachers responded to a Likert-type item rating scale survey that queried their competency and use of specific technologies using a paper-and-pencil survey. Each student responded on a separate data sheet. The

quantitative data from the survey were analyzed using SAS. The descriptive statistics from each analysis were compared. In response to the question, "How skilled are you in using the following technologies to enhance your teaching?"(Table 4) at least 90% or the 110 student teachers rated

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(Place Table 4 about here)

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their skills in using the following technologies as being at either the "Proficient" or "Leader" level:

- Computer word processing
- Television/VCR
- Audiotapes or radio
- E-mail communication with students
- E-mail communication with faculty
- Research on the Internet
- Overhead projector

Forty percent (40%) or more of the 110 student teachers indicated that they would like more training for:

- Digital portfolios
- Database
- Spreadsheet
- Desktop publishing (e.g., Microsoft Publisher, Page Maker)
- Statistical packages (e.g., Mini Tab, SPSS, SAS)
- Digital video

- Web page development
- Web Page publishing
- Content specific software

At least 90% of the 109 student teachers responding to Question 2, "How prepared are you to teach your students to use the following technologies?" (Table 5) as either "Moderately" or

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(Place Table 5 about here)

"Extremely" prepared to teach:

- Computer Word Processing
- Television/VCR
- Audiotapes or Radio
- E-mail communication with students
- E-mail communication with faculty
- Overhead Projector

Forty percent (40%) or more of the student teachers would like more training in order to teach their students the following technologies:

- Digital portfolios
- Database
- Spreadsheet
- Desktop Publishing (e.g., Microsoft Publisher, Page Maker)
- Statistical packages
- Web page development

Discussion

The student teachers' response to the Group Support System was very positive. Their qualitative responses to methods of infusing technology into teaching produced a wide variety (N=36) of technologies. The quantitative survey included questions on 21 technologies. The relative frequency of specific technology use identified through each study was similar.

It was surprising that E-mail was not more frequently mentioned in the qualitative data as the questionnaire found that over 90% of the students rated himself or herself either "Proficient" or "Leader." There is a discrepancy between the technologies on which at least 90% of the 110 students rated themselves as "Proficient" or "Leader" and the percentage of student teachers that reported infusing into their teaching. It was also interesting to note that although at least 90% of the student teachers rated their skills "Proficient" or "Leader" on "Research on the Internet," only 74.3% rated themselves as "Moderately" or "Extremely" prepared to teach their students to use this technology.

The "Would you like training?" section of the questionnaire yielded very useful information for faculty as they infused technology instruction in their own courses. It was noted that almost 60% of the student teachers stated they would like training on digital portfolios. (This group of candidates had just completed digital portfolios as a requirement in student teaching.)

Collecting qualitative and quantitative data in the same setting worked well for this study. Collecting qualitative data first prevented participants from using the researchers' defined categories used in the quantitative questionnaire. Each data collection tool worked well in this evaluation study. Using the tools together in a single setting provided more information than

could have been obtained with a single research method. As GSS availability moves from networked computers to an Internet environment this method of gathering data for research and evaluation will surely increase.

References

Coleman, D. (1995). Groupware technology and applications: An overview of groupware in D. Coleman and R. Khanna (Eds.), *Groupware: Technology and applications*, Prentice Hall, Upper Saddle River, NJ.

Dennis, A., Jessup, G., Nunamaker, J., Vogel, D. (1998). Information Technology to Support Electronic Meetings. *MIS Quarterly, 12* (4), 22-26.

DeSanctis, G. (1998). Communication processes for virtual organizations. *Journal of Computer-Mediated Communication, 3* (4), 46-51.

Kwok, R.C.W., Ma, J. (1999). Use of a group support system for collaborative assessment. *Computers & Education, 32,* 109-25.

Lee, M. (1997). *Organizational and technical factors for Group Support Systems success: An Empirical study on the effects of collaborative organizational design*. Unpublished doctoral dissertation, Claremont Graduate School, CA.

Lobert, B. (1993). *The impact of Group Support Systems on idea incubation: Exploring Creativity in information systems development projects*. Unpublished doctoral dissertation. University of New York.

Malone, T.W and Rockart, J.F. (1991). Non-Hierarchical Structure Using Vertical and Horizontal Information Flow. *Scientific America*, 9, 46-52.

McLean, J.E., McAlister, M.K., Rivera, J.C., and Synder, S.W. (1999). *Electronic decision-making: A Potential new methodology for educational research*. Paper presented at the annual meeting of the Mid-South Educational Research Association. (ERIC Document Reproduction Service No. ED436572)

Nunamaker, J. Dennis, A, Valacich, J.S., Vogel, D., & George, J. (1991). Electronic meeting Systems to support group work. *Communications of the ACM, 34* (7), pp. 40-61.

Patton, M.Q. (1990). *Qualitative evaluation and research methods*. Newbury Park, CA: Sage Publications.

Small, R.V., & Venkatesh, M. (1995). The impact of closure on satisfaction with group decision-making. In *Proceedings of the 1995 Annual National Convention of the Association for Educational Communications and Technology (AECT)* (ERIC Document Reproduction System No. ED383338)

Tai-Sheng, Cen, (1993). *An experimental study of the effects of task training and group outcomes (Decision Support Systems)*. Unpublished doctoral dissertation, The University of Texas at Arlington.

Weatherall, A. and Nunamaker J. (2000). *Getting results with electronic meetings*. St. West Chichester Sussex, Great Britain: Richards Press Ltd.

Wyatt, Robert Lane (1993). *The effect of electronic meeting systems on group performance: The case of the budgeting decision (decision-making)*. Unpublished doctoral dissertation, Memphis State University.

Table 1.

Candidates' GSS Survey: How Are You Infusing Technology into Your Student Teaching Activities? (N=110)

Technology	Number of Candidates Using
• Accelerated Math	1
• Accelerated Reading	5
• Assessment	1
• Audiotapes	8
• Calculators	8
• CD Player	6
• CD-ROM	1
• Cyber hunts	1
• Computers	26
• Computer Software	13
• Digital Camera	7
• Digital Portfolios	3
• Digital Video	1
• E-mail	7
• Electronic Newsletter	2
• Front Page	2
• Film Strip	1
• Games	1
• Graphing	2
• Internet	49
• Keyboarding	1
• LCD Projector	2
• Overhead Projector	28
• Power Point	57
• Quantum Pad	1
• Smart Board	13
• Sewing Machines (Computerized)	2
• Spreadsheets	2
• STI	2
• Technology (non-specific)	12
• Television	24
• VCR	14
• Word Processing	7
• Web Quest	14
• Developing Web Pages (School/Class)	4
• Visiting Web Sites	8
Total	336

Table 2.

Candidates' GSS Technology Survey: Barriers to Technology Use in Schools

- I would like to use technology more in my lessons, but my room is not equipped with proper set ups for technology.
- I have not been in a situation where technology is praised.
- I also want to do a Power Point presentation, but it's hard in our schools because I'd have to go to the library and sometimes it's not logical to leave the room just to be able to use technology in the lesson prepared.
- I have a teacher who is very "scared" of technology, but I incorporate it as much as I can.
- I want my students to have time to use computers for different content areas, but due to the lack of time and computers, it is impossible.
- I want to use Power Point more, but there is only one place in my room to plug the projector in. It is across the room and makes the projector cover the entire wall instead of the screen.
- In the classroom, I am not able to use the computers when working with the entire class. We do not have that kind of technology at my school.
- It is hard to use computers because the labs are being used for portfolios. However, when I am able to use technology it is very useful for the students.
- It is hard to use computers when you have to schedule time in the computer lab. It does make it difficult, but the results are good.
- My school does not contain a lot of technology- just the basics.
- My school has limited technology within each classroom.
- Not enough time to fully utilize technology.
- Presently, my classroom is not equipped with a great amount of technology. Our school is limited to one media cart where a computer is linked to a television monitor.
- I haven't gotten to use technology, computers, as much as I would like.
- The computer lab at my high school is horrible! It is not maintained by any one person, students can come and go as they please, and software programs are not updated regularly.
- The TV is so far away from the students, and they have difficulty staying in the lesson.
- There is a limited space to do much with technology in my classroom.
- There is only one working computer, which is behind the teacher's desk.

Table 3.

How Has Infusing Technology Changed the Learning Process for Your Students?

Positive Changes	Frequency of Statement	No Changes/Less than Positive	Frequency of Statement
Increased student learning	100	Has not changed the learning process	6
Helped to Diversify Instruction	2	Can be a distraction in the classroom	10

Note: Total of 118 comments from the group of 110 student teachers.

Table 4.

How Skilled Are You in Using the Following Technologies to Enhance Your Teaching?

	Novice	Somewhat	Proficient	Leader	% Proficient or Leader (P+L/N)	Would you like training?
digital portfolios	17	44	35	14	44.5%	yes=60 no=44
computer word processing	0	5	40	65	95.4%	yes=10 no=94
television/VCR	0	1	30	79	99.0%	yes=4 no=100
audiotapes or radio	0	2	26	79	95.4%	yes=7 no=97
E-mail communication with students	2	5	32	71	93.6%	yes=9 no=95
E-mail communication with faculty	0	4	33	73	96.3%	yes=6 no=98
research on the Internet	0	1	36	72	98.1%	yes=8 no=95
overhead projector	2	1	27	77	94.5%	yes=5 no=98
database	19	39	38	13	46.3%	yes=44 no=60
spreadsheet	9	38	39	22	55.4%	yes=44 no=60
desktop publishing (e.g. Microsoft Publisher, Page Maker)	28	42	29	11	36.3%	yes=55 no=49
charts/graphing	12	39	45	14	53.6%	yes=41 no=63
statistical packages (e.g. Mini Tab, SPSS, SPS)	59	27	13	10	20.9%	yes=47 no=56
presentation softwares (e.g., PowerPoint)	2	24	36	48	76.3%	yes=26 no=78
wireless hand-helds (e.g., calculators, graphing calculators)	9	21	35	42	70.0%	yes=26 no=75
digital camera	5	30	45	30	68.1%	yes=37 no=67
digital video	20	48	25	17	38.1%	yes=52 no=52
online discussions (chat room, etc.)	18	31	31	28	53.6%	yes=24 no=78
web page development	29	42	26	13	35.4%	yes=62 no=42
web page publishing	33	51	18	8	23.6%	yes=68 no=36
content specific software	18	41	38	4	38.2%	yes=44 no=59

Table 5.

How prepared are you to teach your students to use the following technologies? (N=109)

	Not at all	Somewhat	Moderately	Extremely	% Moderately or Extremely	Would you like training?
digital portfolios	27	36	37	9	42.2%	yes=54 no=34
computer word processing	2	4	32	71	94.4%	yes=11 no=69
television/VCR	0	3	26	80	97.2%	yes=7 no=74
audiotapes or radio	1	6	25	77	93.5%	yes=10 no=72
E-mail communication with students	0	6	34	69	94.4%	yes=12 no=69
E-mail communication with faculty	1	7	32	69	91.8%	yes=10 no=71
research on the Internet	3	37	69	12	74.3%	yes=12 no=69
overhead projector	1	4	23	80	94.4%	yes=8 no=73
database	25	39	32	11	39.4%	yes=48 no=38
spreadsheet	19	41	32	15	43.1%	yes=49 no=40
desktop publishing (e.g., Microsoft Publisher, Page Maker)	29	36	31	12	38.4%	yes=52 no=35
charts/graphing	16	42	36	15	46.7%	yes=39 no=47
statistical packages (e.g. Mini Tab, SPSS, SPS)	48	36	16	8	21.8%	yes=47 no=41
presentation softwares (e.g., PowerPoint)	4	19	35	49	77.06%	yes=23 no=62
wireless hand-helds (e.g., calculators, graphing calculators)	12	31	33	33	60.5%	yes=36 no=51
digital camera	12	29	39	29	62.4%	yes=40 no=45
digital video	13	32	36	28	58.7%	yes=41 no=43
online discussions (chat room)	17	35	31	26	43.1%	yes=34 no=52
web page development	26	41	30	12	38.5%	yes=54 no=33
content specific software	22	27	45	15	55.0%	yes=41 no=46

Note: Not all frequencies sum to 110 because of non-response to specific items

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